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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,215	09/03/2003	Jin-Hyung Kim	1349.1274	2612

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EXAMINER	
CRUZ, IRIANA	

ART UNIT	PAPER NUMBER
2609	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/653,215	KIM, JIN-HYUNG	
	Examiner	Art Unit	
	Iriana Cruz	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☒ Claim(s) *5-6,13-14 and 16-17* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *September 5, 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/13/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. IDS statements received on May 13th, 2005 have been considered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 5-6, 13-14 and 16-17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 5 and 6, in claim 5 applicant discloses the image forming unit performs a printing operation, however, in claim 6 applicant discloses that the same image forming unit does not perform a printing operation during the same time period of the claim 5. These claims are indefinite and fail to particularly point out the invention.

Regarding claims 13 and 14, the same problem persists as printing is done in claim 13 with respect to the image data transmitted before the time-out however, claim 14 states the exact opposite and not printing with respect to the image data transmitted before the time-out. These claims are indefinite and fail to particularly point out the invention.

Regarding claims 16 and 17, again the problem persists as printing the image data received before the time out value was exceeded was done in claim 16, however, claim 17 discloses not printing the image data received before the time-out value was exceeded. These claims are indefinite and fail to particularly point out the invention.

With regards to the above claims it is not clear what is the scope of the invention, is printing/non-printing feature constitutes simply a different modes of the invention or are there two separate inventions, which need to be examined separately? Because taken as a whole, the apparatus of the invention would be both printing and not printing at the same time, and there would be nothing left to exclude, i.e. the regarded claims would be not limiting the subject matter further.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims1-17 rejected under 35 U.S.C. 102(e) as being anticipated by Jinbo et al. (US Pub number 2002/0054330).

As per Claim 1 Jinbo discloses wireless image forming apparatus to wirelessly transmit and receive data with an external apparatus (External apparatus can be inferred as a portable terminal. (See page 4, paragraph 65), comprising: a wireless communication unit to receive image data transmitted from the external apparatus (See Fig.4, paragraph 11 and paragraph 56), demodulate the received image data, output the

demodulated image data (Demodulated signal. See paragraph 71), detect a wireless reception sensitivity of the image data, and output reception sensitivity information corresponding to a result of detection (Reception sensitivity of the data can be inferred as the distance between the image forming apparatus and the external apparatus. See paragraph 63); and an image forming unit to change a time-out value based on the reception sensitivity information (Time-out value that change depending on the reception of the signal can be inferred as a power consumption mode that changes depending on the distance between the image forming apparatus and the portable terminal. See paragraph 86), and stop the reception of a data from the external apparatus as a time-out when a period of non-reception of the data exceeds the time-out value during the transmission of the image data from the external apparatus (See paragraph 93. When the timer is terminated the routine stops and starts from the beginning for another timer. See paragraphs 105 and 117).

As per Claim 2 Jinbo discloses the wireless image forming apparatus, wherein the wireless communication unit further comprises: a wireless communication module to wirelessly receive the image data and demodulate the data (See paragraph 71), detect the wireless reception sensitivity of the image data, and output the reception sensitivity information based on the detected wireless reception sensitivity (See paragraph 63); a storage unit to temporarily store the demodulated image data and output the stored data, the storage unit storing a control program to detect the wireless reception sensitivity; and a central processing unit to control the communication of the data and the detection of the wireless reception sensitivity of the wireless communication module

by loading the control program from the storage unit, and output the reception sensitivity information input from the wireless communication module (See paragraphs 60 and 76).

As per Claim 3 Jinbo teaches the wireless image forming apparatus, wherein the wireless communication module outputs the reception sensitivity information by repeatedly checking the wireless reception sensitivity of the image data for a predetermined temporal interval in accordance with a control signal of the central processing unit while the image data is being transmitted (See paragraphs 103, see Fig. 21 and page 11, claim 3).

As per Claim 4 Jinbo teaches the wireless image forming apparatus, further comprising: an input/output interface unit to convey the demodulated image data and the detected reception sensitivity information to the image forming unit, and receive feedback information with respect to a printing operation from the image forming unit, and then wirelessly transmit the feedback information (See paragraph 78).

As per Claims 5,13 and 16 Jinbo teaches the wireless image-forming apparatus, wherein the image-forming unit performs a printing operation with respect to the image data transmitted before the timeout (See paragraphs 96 and 100).

As per Claims 6, 14 and 17 Jinbo teaches the wireless image forming apparatus, wherein the image forming unit does not perform a printing operation with respect to the image data transmitted before the time-out (If the temperature of the printer is not set then even if the data has being set it wont be printed. See paragraph 112 and Fig.13).

As per Claim 7 Jinbo teaches the wireless image forming apparatus, wherein the image forming unit comprises: a storage unit to temporarily store time-out information

corresponding to the reception sensitivity information input from the wireless communication unit and the demodulated image data (See paragraphs 66, 76, 95); a controlling unit to change the time-out value in accordance with the time-out information corresponding to the reception sensitivity information stored in the storage unit, and stop the data reception when the period of non-reception of the image data exceeds the time-out value; and a printing unit to print the image data based on the control signal of the controlling unit (See paragraphs 63 and 117).

As per Claim 8, Jinbo discloses the wireless image forming apparatus, wherein: the controlling unit uses the time-out information stored in the storage unit to determine the time out value such that the time-out value is in inverse proportion to the wireless reception sensitivity (When the power-saving is on, its because the time out passed. This means the signal receptivity stopped. When signal reception starts again then the power saving is off or in a lower level. For this case wireless reception (a new signal for a new printing job) is in inverse proportion with the time out value (The signal is sent completely, system has "time-out" and power-saving is on. See paragraph 127).

As per Claim 9, Jinbo discloses the wireless image forming apparatus, wherein the image forming unit further comprises: an input/output interface unit to receive the image data and the reception sensitivity information from the wireless communication unit, and to output the feedback information with respect to the printing operation to the wireless communication unit (See Fig. 4, 100, 124, 203).

As per Claim 10, Jinbo discloses a wireless printing method comprising: changing a time-out value in accordance with a wireless reception sensitivity of a

wirelessly transmitted image data (See paragraphs 127 and 132); performing printing of the transmitted image data; and stopping a reception of the image data when a period of non-reception of the image data exceeds the time-out value (Routine starts is referred to when the system starts checking for documents to print, which stops any documents that where being received before the time-out. See paragraphs 86 and 93 and Fig.9).

As per Claim 11, Jinbo teaches the wireless printing method, wherein the changing the time-out value in accordance with the wireless reception sensitivity of the wirelessly transmitted image data comprises: detecting the wireless reception sensitivity of the transmitted image data at predetermined temporal intervals (See paragraph 63 and 117); reading time-out information corresponding to the detected wireless reception sensitivity; varying the time-out value in accordance with the read time-out information (See paragraphs 131 and 132 and Fig.9, step 62); and determining whether the reception and printing of the image data is complete (See paragraph 100 and Fig.11 and Fig. 13).

As per Claim 12, Jinbo teaches the wireless printing method further comprising: setting up the time-out information corresponding to the wireless reception sensitivity; and storing the set time-out information (See paragraph 63).

As per Claim 15, Jinbo teaches a wireless printing method comprising: receiving image data; detecting a wireless reception sensitivity of the image data; selectively varying a time out value in accordance with the detected wireless reception sensitivity of the image data (See paragraph 131); determining whether reception and printing of the

image data are complete (See paragraph 100); if reception and printing of the image data are not complete, determining whether a period of interruption of reception of the image data exceeds the varied time out value if the period of interruption of reception of the image data exceeds the varied time out value, completing printing and ending; if the period of interruption of reception of the image data does not exceed the varied time out value, continuing to receive image data, detecting wireless reception sensitivity of the image data, and determining whether reception and printing of the image data are complete until one of the reception and printing of the image data are complete, and the period of interruption of reception of the image data exceeds the varied time out value; and if reception and printing of the image data are complete, ending (See paragraph 127 and Fig.11 and Fig.13).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jinbo et al. (US Pub. No. 2002/0054330 A1), and further in view of Kadowaki (US Pub. No. 2002/0196459 A1).

8. With respect to Claim 18 Jinbo discloses a wireless image forming system that transmit image data to be printed from an user to the image forming apparatus. Jinbo

discloses a wireless image forming apparatus (like a printer) that communicates wirelessly with a terminal from where the printing information is being sent. Jinbo teaches a varying time-out (moment when the signal stops being received which starts a power-saving mode for the system) that is calculated depending on how far (signal reception) the signal is being sent from in order to stop the reception when the time out has passed.

Jinbo does not disclose a wireless unit that receives the print requests from the users of the network and then sends the print request to the wireless image forming apparatus.

However, Kadowaki teaches a wireless network that has a wireless communication unit between the user and the image forming apparatus that receives the print requests from different users and then send them to the image forming apparatus to be printed (Fig.1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to join wireless network with a wireless access point between the wireless communication system of the user and wireless image forming apparatus that Kadowaki discloses with the time-out for the signal reception of Jinbo.

The motivation for the combination would be that by joining both systems together the communication between several users sending print requests to the wireless image forming apparatus would be more efficient because a wireless communication unit would be organizing the order in which each print request was sent and by using the timeout value if any problem with the reception is taking place this bad

reception of the signal would be cancelled in order to make the signal to be sent again without interruptions.

With respect to Claim 19, Kadowaki teaches a wireless communication unit (access point) that stands in between the image forming apparatus and the users that send the print request in order to control the requests that go to the image forming apparatus (Fig.1, See paragraphs 24, 25 and 26).

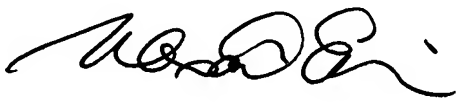
With respect to Claim 20, Kadowaki teaches several clients connected wirelessly to the network, where print requests are sent to the controller or wireless communication unit (access point) to be organized in the order they where received to send them in that same order to the wireless image forming apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iriana Cruz whose telephone number is (571) 270-3246. The examiner can normally be reached on Monday-friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Eisen can be reached on (571) 270-1455. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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